



EXECUTIVE COMPUTING

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Floppy-disk woes? Add-on can end them

Most of us didn't anticipate a career in entertainment when we bought our small business computer. Yet, because a small computer's floppy disks typically only hold 360 kilobytes of data — the equivalent of 360,000 characters — we end up as "disk jockies," constantly swapping floppy disks.

The alternative is to get a Winchester — or hard — disk drive for your computer. Several machines now come with a hard drive included — the IBM XT, for instance, with its 10 megabyte drive, the equivalent of 27 floppy disks, or the IBM PC-AT, with twice that capacity.

But in the real world, people rarely buy the machine they end up needing later on — or the storage capacity they wind up needing. That's why there is such a big market for "add-on" mass storage devices.

In deciding how to upgrade, many questions can be asked. But for most small computer owners, the key question is, how does the price and performance of upgrading with IBM gear compare with selected non-IBM equipment?

In this week's column, I'll briefly discuss three non-IBM disk systems I've selected for some of my clients. I've found that each is a good buy in appropriate situations, and the discussion might help you assess your own needs.

Sysgen workhorse system

Sysgen has a number of combination disk and tape products that are reasonably priced and very reliable. For evaluation, I selected the Model II-G-20, priced at \$3,295, which includes a 20 megabyte hard disk and a 20 megabyte tape cartridge for backup.

Through months of continuous use attached to my IBM PC, the Sysgen worked like a charm. It essentially gave the PC the disk storage characteristics of the more advanced IBM AT, plus tape backup capability not currently available with the AT.

My only complaint is that the backup tape

required attended operation — in other words, you can't give the system the backup command and walk away; it insists on having operator responses along the way. This is annoying, but I probably could have constructed a software "macro," using a program like ProKey to issue the commands, if it became too bothersome.

Installation was easy, and the speed of the hard disk seemed comparable to the disk that comes with an XT, although much slower than the Tallgrass unit I tested next. (During my testing of the Model II-G-20, Sysgen began shipping a new model called the XL. The XL offers a 60 megabyte tape drive for the same price as the 20 MB Model II-G-20).

Tallgrass for "power users"

For several years now, Tallgrass Technologies has been the leading shipper of hard disks with tape backup systems, and they are constantly improving the technology as they go along. Their latest innovation is a new operating system, called PC/T, which comes with the drive and resides on the hard disk, side-by-side with PC-DOS.

The advantage of PC/T is that it actually allows you to treat the tape drive like a hard disk, so you can use PC-DOS-like commands to copy, delete or back up files. Most "streaming tape" backup systems, however, only let you back up or restore an entire volume (such as the C drive or D drive) at a time.

The Tallgrass unit also boots (starts the system after you turn it on) directly from its hard disk, which is another feature most other add-on drives don't have. The hard disk was the fastest in my benchmarks of all three tested, and the tape did not require attended operation during backup.

For "power users" requiring almost double the disk storage capacity of the IBM AT, and faster disk access times than most similar add-on systems, the Tallgrass TG-6135, at \$4,495, is the most impressive unit I've seen.

The dual-disk Bernoulli Box

For anyone who has ever experienced the effects of a disk crash — the complete loss of all the data on the disk — Iomega's Bernoulli Box, with a list price of \$3,695, is very appealing. You basically cannot crash the system, according to the company, because of its unique design.

Instead of being a hard Winchester-type disk that spins at high speed, the Bernoulli Box contains two high-capacity floppy disks, 10 megabytes each, which spin rather slowly. Still, my experience is that the disk access times are similar to those with the IBM XT.

On the negative side, the Bernoulli Box is very large (about the same size as the PC unit itself) and prone to some strange clicking and grinding noises while operating.

But everyone I know who has one raves about it. You get virtually unlimited storage in 10 megabyte increments, since the dual disks are removable.

The three systems discussed here all seem reliable and reasonably priced. There are certainly others that are also impressive, but I don't think you'll be disappointed with any of the above.

For more information about add-on storage — and another alternative, so-called "add-in" disk drives — write me at the address below.

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